October 31, 2013

Exhibit W. Dow Louisiana Operations West Preliminary Geotechnical Engineering Report

Attention : Jim A. Cavanaugh
Site Development Director
Email: jim@brac.org
Phone: (225) 339-1163

Re: **Geotechnical Site Evaluation Report**
Dow Industrial Site Evaluation
Iberville Parish, Louisiana
PSI Project No. 0193522-01

Dear Mr. Cavanaugh:

Professional Service Industries, Inc. is pleased to submit our Site Evaluation Report for the above referenced project. This report includes the results of field and laboratory testing, and information regarding the compatibility of this site with industrial development, suitability of soils for building foundations and on-site roadways, requirements of soil augmentation for construction of a typical 100,000 sq. ft. industrial manufacturing building and depth of groundwater.

We appreciate the opportunity to perform this Geotechnical Site Evaluation Study. If you have any questions pertaining to this report, or if we may be of further service, please contact our office.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Steven L. Gunter, P.E.
Department Manager
Geotechnical Services

Name: Steven L. Gunter, P.E.
Date: October 31, 2013
License No.: 30561

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GEOTECHNICAL SITE EVALUATION REPORT

DOW INDUSTRIAL SITE STUDY
IBERVILLE PARISH, LOUISIANA
PSI PROJECT NO.: 0193522-01

PREPARED FOR

BATON ROUGE AREA CHAMBER
564 LAUREL STREET
BATON ROUGE, LA 70801

OCTOBER 31, 2013

BY
PROFESSIONAL SERVICE INDUSTRIES, INC.
11950 INDUSTRIPLEX BLVD.
BATON ROUGE, LOUISIANA 70809

TABLE OF CONTENTS

Page No.

PROJECT INFORMATION 1
Project Authorization 1
Project Description 1
Purpose and Scope of Services 1

SITE AND SUBSURFACE CONDITIONS 2
Site Location and Description 2
Field Exploration 2
Laboratory Testing 3
Subsurface Conditions 3
Groundwater Information 4

EVALUATION AND DISCUSSIONS 4

REPORT LIMITATIONS 5

APPENDIX

- Site Vicinity Map
- Boring Location Plan
- Boring Logs
- Key to Terms and Symbols Used on Logs

PROJECT INFORMATION

Project Authorization

Professional Service Industries, Inc. (PSI) has completed a geotechnical site evaluation study for the Dow Industrial site, located in Plaquemine, Louisiana. Our services were provided in general accordance with PSI Proposal No. 193-106845, dated October 4, 2013. Authorization to provide our services was provided by Mr. Adam Knapp (President and CEO with the Baton Rouge Area Chamber) whom signed our Proposal on October 8, 2013.

Project Description

The site for the requested geotechnical evaluation is approximately 883 acres in size and is located 1 mile north of Plaquemine, Louisiana. Primary objectives for this preliminary report are to provide information regarding the compatibility of this site with industrial development, suitability of soils for building foundations and on-site roadways, requirements of soil augmentation for construction of a typical 100,000 sq. ft. industrial manufacturing building, and the depth of the free groundwater table.

This geotechnical site evaluation report shall provide an initial baseline of the site subsurface conditions that will likely be encountered during future site development. However, as with any geotechnical investigation, particularly given the size of this project site and relatively limited number of borings performed, variations between borings may and should be expected to exist, and there remains a distinct possibility that other conditions may exist on site that were not encountered within the scope of this exploration.

The opinions and information to be presented in this report are estimates for preliminary consideration only, are based on limited geotechnical exploration, and are not to be used for final design and construction.

Purpose and Scope of Services

The purposes of PSI's geotechnical services are to:

- Drill five (5) borings to a terminal depth of 25 feet below existing grade and two (2) borings to a terminal depth of 75 feet below existing grade across the site to facilitate this site characterization study;
- Evaluate subsurface soil conditions and depth-to-water at the project site;
- Perform limited laboratory tests on soil samples recovered from the project site; and,
- Provide information regarding the compatibility of this site with industrial development, suitability of soils for building foundations and on-site roadways, requirements of soil augmentation for construction of a typical 100,000 sq. ft. industrial manufacturing building and depth of groundwater.

The scope of services did not include an environmental assessment for determining the presence or absence of wetlands, or hazardous or toxic materials in the soil, surface water, groundwater, or air on or below, or around this site. Any statements in this report or on the boring logs regarding odors, colors, and unusual or suspicious items or conditions are strictly for informational purposes. Prior to development of this site, an environmental assessment is advisable.

Additionally, PSI did not provide any service to investigate or detect the presence of moisture, mold or other biological contaminants in or around any structure, or any service that was designed

or intended to prevent or lower the risk of the occurrence or the amplification of the same. Client acknowledges that mold is ubiquitous to the environment with mold amplification occurring when building materials are impacted by moisture. Client further acknowledges that site conditions are outside of PSI's control, and that mold amplification will likely occur, or continue to occur, in the presence of moisture. As such, PSI cannot and shall not be held responsible for the occurrence or recurrence of mold amplification.

SITE AND SUBSURFACE CONDITIONS

Site Location and Description

The project site is located approximately one mile northwest of Plaquemine, Louisiana, bounded generally by LA Hwy. 1 to the east, W. Homestead Drive to the south, Enterprise Boulevard to the west and Hwy. 1148 to the north (as illustrated on the Site Vicinity Map provided on Figure No. 1 in the Appendix). The site currently exists as a cultivated field and was planted with maturing sugar cane at the time of our field exploration. The ground surface generally appeared topographically level, firm and was generally dry. Our truck-mounted drill rig was limited in its movements to the main field roads traversing the site due to the presence of crops in the field.

Field Exploration

The field exploration included mobilization to the site by a PSI drilling crew, drilling of the soil borings, and recovering soil samples. Borings B-1 and B-2 were drilled and sampled to a depth of about 75 feet below existing grade. Borings B-3 through B-7 were drilled and sampled to a terminal depth of about 25 feet below existing grade (as illustrated in the Boring Location Plan on Figure No. 2 in the Appendix). As noted previously, the borings were advanced using a truck-mounted drill rig equipped with a rotary head and hollow-stem flight augers. Borings B-1 and B-2 were drilled utilizing wet-rotary drilling techniques, while Borings B-3 through B-7 were drilled and sampled utilizing hollow stem augers. Drilling and sampling activities were performed in general accordance with referenced ASTM procedures or other accepted methods. The shallow soil borings (i.e., 25 feet deep) were backfilled with soil cuttings upon completion of drilling and groundwater observations while the deeper soil borings (i.e., 75 feet deep) were backfilled with a cement/bentonite grout mixture per LA DOTD requirements.

Undisturbed samples of cohesive soils were generally obtained using three (3) inch diameter thin-wall tube samplers (Shelby tube) in general accordance with the procedures for "Thin-Walled Tube Geotechnical Sampling of Soils" (ASTM D1587). These samples were extruded in the field with a hydraulic ram and were identified according to boring number and depth, wrapped in aluminum foil, placed in polyethylene plastic wrapping to protect against moisture loss and transported to the laboratory in containers to minimize disturbance.

For cohesionless soils, Standard Penetration Tests (SPT) were performed to obtain standard penetration values of the soil. The standard penetration value (N) is defined as the number of blows of a 140-pound hammer, falling 30 inches, required to advance the split-barrel sampler 1-foot into the soil. To perform the test and obtain a sample, the sampler is lowered to the bottom of the previously cleaned drill hole and advanced by blows from the hammer. The number of blows is recorded for each of three successive increments of six inches penetration. The "N" value is obtained by adding the second and third incremental numbers. The results of the standard penetration test indicate the relative density of cohesionless soils, and thereby provide a basis for estimating the relative strength and compressibility of the soil profile components. Soil samples

were obtained utilizing a two-inch O.D. split-barrel sampler in general accordance with procedures for "Penetration Test and Split-Barrel Sampling of Soils" (ASTM D 1586). These samples were identified according to boring number and depth, placed in polyethylene plastic wrapping to protect against moisture loss and transported to the laboratory.

Laboratory Testing

Selected soil samples were tested in the laboratory to determine material properties for our evaluation. Visual classifications were performed in the laboratory. Physical testing included determination of moisture contents, Atterberg limits classification testing and unconfined compressive strength tests and unconsolidated undrained triaxial strength tests (to supplement the field pocket penetrometer testing). The laboratory testing was performed in general accordance with ASTM procedures. Samples not altered by laboratory testing will be retained for sixty (60) days from the date of this report and then be discarded.

Subsurface Conditions

Boring B-1 disclosed very stiff to soft fat clay from the ground surface to about 10 feet, underlain by a 5 foot thick layer of firm silt and further underlain by a 5 foot layer of stiff fat clay extending to about 20 feet below grade. From 20 feet to 40 feet, a loose silt layer was disclosed followed by very soft fat clay to about 48 feet, very soft lean clay to about 58 feet and firm to very soft fat clay to about 75 feet, the maximum depth explored.

Boring B-2 disclosed hard to stiff fat clay from the ground surface to about 8 feet, underlain by firm to very soft to stiff lean clay to about 23 feet. Underlying the lean clay, stiff fat clay was disclosed to about 28 feet followed by a firm silt layer to about 43 feet. From 43 feet to 75 feet, the maximum depth explored, alternating layers of very soft to firm lean and fat clays were disclosed.

Borings B-3 through B-7 disclosed very stiff lean clay from the ground surface to 2 to 6 feet below grade. This lean clay layer was underlain by firm to stiff fat clay to the boring termination depth of about 25 feet below existing grade. An exception occurred in Boring B-6 wherein a layer of firm silty clay was disclosed from about 18 to about 23 feet below existing grade.

The above subsurface description is generalized in nature to highlight the major subsurface stratification features and material characteristics. The boring logs included in the Appendix should be reviewed for specific information at the individual boring locations. These records include soil descriptions, stratifications, penetration resistances, locations of the samples, and laboratory test data. The stratifications shown on the boring logs represent the conditions only at the actual boring locations. Variations may occur and should be expected between boring locations. The stratifications represent the approximate boundary between subsurface materials and the actual transition may be gradual.

Groundwater Information

The free groundwater table was encountered as shown in the Table below:

Boring No.	Depth Below Grade Groundwater Encountered (Ft.)	Depth Below Grade After 24 Hours (Ft.)
B-1	*	8
B-2	*	6
B-3	24	7
B-4	Not Encountered	8
B-5	Not Encountered	4
B-6	19	3
B-7	Not Encountered	6

*Borings were drilled using wet rotary drilling techniques; therefore the initial depth to groundwater was not measured in these borings.

It should be noted that groundwater level fluctuations at this site may occur due to seasonal and climatic variations, the stage of the Mississippi River due to its relative close proximity to the project site, alteration of drainage patterns, land usage and ground cover. We recommend the Contractor determine the actual groundwater levels at the time any future construction activities begin.

EVALUATION AND DISCUSSIONS

The type and depth of foundation suitable for a given structure primarily depends on several factors including the subsurface conditions, the function of the structure, the loads it may carry, the cost of the foundation and the criteria set by the Design Engineer with respect to vertical and differential movement which the structure can withstand without damage.

Based on the limited number of soil borings, field data and laboratory test results, the proposed site is generally feasible for industrial development. The subsurface soils explored are suitable for building foundations and site roadways, although due to the presence of fat clay (CH) soil in the upper 8 to 10 feet of the soil profile of selected borings, potential vertical rise (PVR) would need to be further evaluated. PVR at this site could be alleviated by undercutting the fat clay soils to a predetermined depth and replacing with moisture conditioned, properly compacted lean clay (CL) soils, or with the addition of chemical treatment such as lime mixing. Detailed column loads for a typical 100,000 sq. ft. industrial manufacturing building were not provided at the time of this study; however, the structural column loads are anticipated to be on the order of 60 to 100 kips with wall loads on the order of 3.0 kips per lineal foot.

Foundation systems may include shallow foundations (for lightly loaded structures with allowance for some settlement), mat foundations, deep foundations such as driven piles or auger cast-in-place (ACIP) piles or drilled piers for this project. Pile/pier foundations are recommended for the support of the heavy structures or settlement sensitive structures at this site. The choice of type of deep foundation should be based on the tolerance criteria for the performance of the structures and economics of construction. Lightly loaded structures can generally be supported on shallow spread footings/grade beam system, or mat foundations, as long as the PVR issues described above are mitigated. These foundations will be governed by the anticipated load and settlement tolerances.

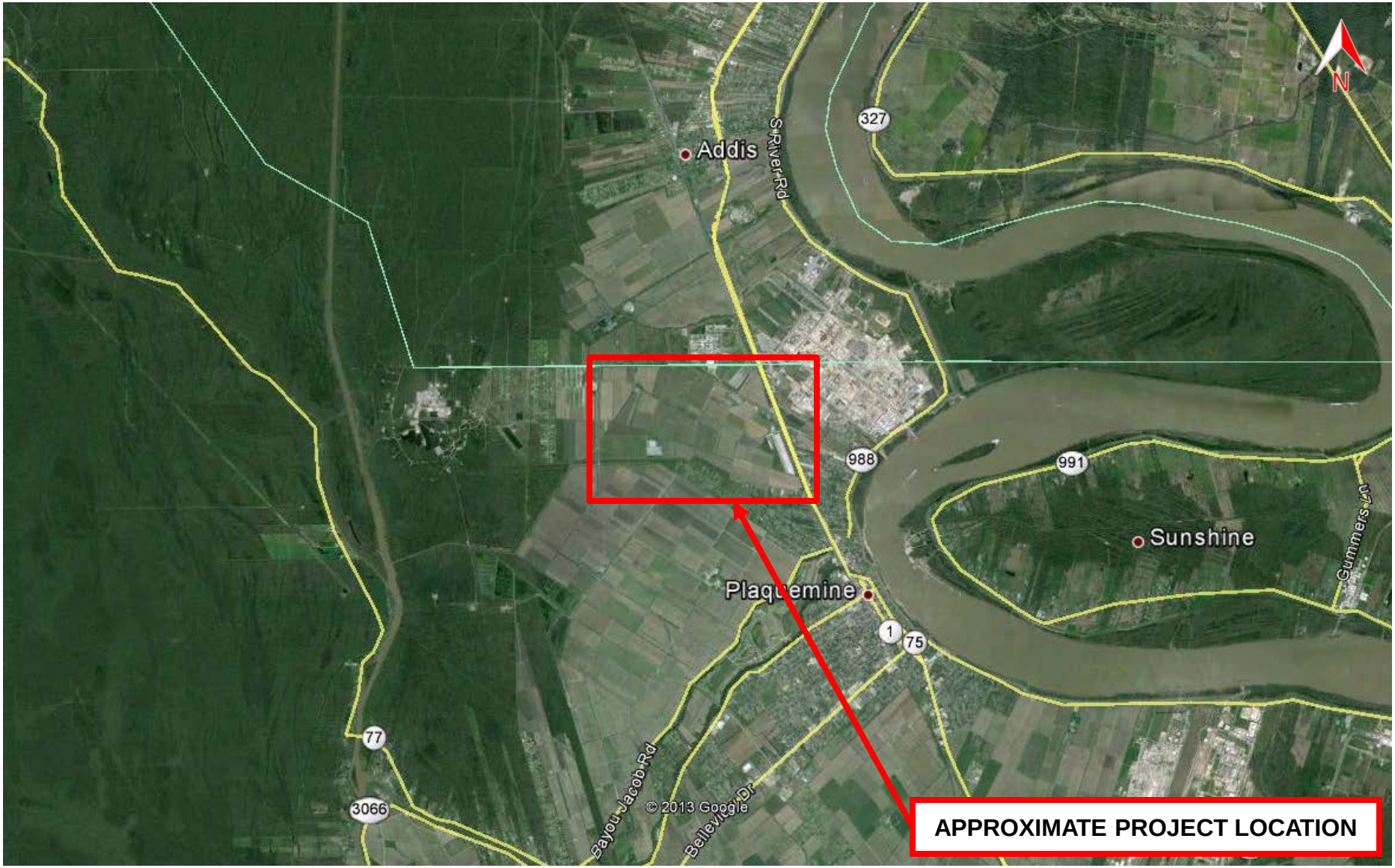
As stated previously, the opinions and information presented in this site evaluation report are estimates for preliminary consideration only, and are based on a very limited geotechnical exploration, and are not to be used for final design and construction.

REPORT LIMITATIONS

The preliminary information submitted in this report is based on the available subsurface data obtained by PSI at the time of our field exploration. PSI warrants that the preliminary findings contained herein have been made in accordance with generally accepted drilling procedures and visual soil classification methods in the local area. No other warranties are implied or expressed. This report has been prepared for the exclusive use of the Baton Rouge Area Chamber for the specific purpose of determining general subsurface information at the site of the referenced project. Upon authorization through a supplemental services agreement, PSI will be available to perform a thorough geotechnical study and provide complete and final recommendations.

APPENDIX

SITE VICINITY MAP



GEOTECHNICAL ENGINEERING SERVICES

DOW INDUSTRIAL SITE

PLAQUEMINE, LOUISIANA

DATE:	10/2013
DRAWN:	WV
CHKD:	SG

FIGURE 1

PSI PROJECT NO.: 0193522-01

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BORING LOCATION PLAN

GEOTECHNICAL ENGINEERING SERVICES DOW INDUSTRIAL SITE PLAQUEMINE, LOUISIANA		DATE:	10/2013
		DRAWN:	WV
FIGURE 2	PSI PROJECT NO.: 0193522-01	CHKD:	SG

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LOG OF BORING B-1

Dow Industrial Site
Plaquemine, Louisiana

TYPE OF BORING: WET ROTARY

PSI Project No.: 0193522-01

LATITUDE: N 30° 19' 8.76"
LONGITUDE: W 91° 16' 24.7"

BORING LOCATION PLAN: APPENDIX SHEET NO. 2

DEPTH, FT.	SOIL TYPE	USCS SYMBOL	WATER LEVELS	SAMPLES	SOIL DESCRIPTION	N-BLOWS/FT.	% PASSING No. 200 SIEVE	LIQUID LIMIT LL	PLASTIC LIMIT PL	PLASTICITY INDEX PI	MOISTURE CONTENT (%)	SHEAR STRENGTH (tons/ft²) HANDPEN	SHEAR STRENGTH (tons/ft²) TORVANE	SHEAR STRENGTH (tons/ft²) UC	SHEAR STRENGTH (tons/ft²) UU	DRY UNIT WEIGHT (lbs/ft³)
		CH			**Very stiff, brown fat CLAY** w/ ferrous partings			62	21	41	24	1.75				
					w/ traces of gravel			68	22	46	29	1.13				
5		CH			**Very stiff, gray fat CLAY** w/ ferrous stains						26	1.75		1.03		93
			▽					73	24	49	33	1.13				
		CH			**Soft, tan and light gray fat CLAY**						42	0.25		0.27		81
10		ML			**Firm, gray SILT** w/ clay											
											31		0.15			
15		CH			**Stiff, gray fat CLAY** w/ ferrous nodules											
											51	0.63		0.41		72
20		ML			**Loose, gray SILT** w/ clay											
				☒		6					35					
25																
				☒		5					35					
30																
				☒		7					36					
35																
				☒		4		31	25	6	33					
40		CH			**Very soft, gray fat CLAY**											
											55		0.05		0.24	68
45																
		CL			**Very soft, gray lean CLAY** w/ organics and large roots						99		0.18			
50																

DEPTH OF BORING: 75 feet

DATE DRILLED: 10/21/13

DELAYED GROUNDWATER (FT): 8 @ 24 hours

NOTES: The stratification lines represent approximate boundaries.

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LOG OF BORING B-1

Dow Industrial Site
Plaquemine, Louisiana

TYPE OF BORING: WET ROTARY

PSI Project No.: 0193522-01

LATITUDE: N 30° 19' 8.76"
LONGITUDE: W 91° 16' 24.7"

BORING LOCATION PLAN: APPENDIX SHEET NO. 2

DEPTH, FT.	SOIL TYPE	USCS SYMBOL	WATER LEVELS	SAMPLES	SOIL DESCRIPTION	N-BLOWS/FT.	% PASSING No. 200 SIEVE	LIQUID LIMIT (LL)	PLASTIC LIMIT (PL)	PLASTICITY INDEX (PI)	MOISTURE CONTENT (%)	SHEAR STRENGTH (tons/ft²) HANDPEN	SHEAR STRENGTH (tons/ft²) TORVANE	SHEAR STRENGTH (tons/ft²) UC	SHEAR STRENGTH (tons/ft²) UU	DRY UNIT WEIGHT (lbs/ft³)
		CL			**Very soft, gray lean CLAY** w/ organics and large roots (layer continued from previous page)											
55											88		0.25		0.37	47
		CH			**Firm, gray fat CLAY** w/ roots						65	0.50				
60																
					-becomes very soft						87		0.15			
65																
											63		0.15		0.21	65
70																
											60	0.25				
75					Boring terminated at 75 feet.											
80																
85																
90																
95																
100																

DEPTH OF BORING: 75 feet

DATE DRILLED: 10/21/13

DELAYED GROUNDWATER (FT): 8 @ 24 hours

NOTES: The stratification lines represent approximate boundaries.

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LOG OF BORING B-2

Dow Industrial Site
Plaquemine, Louisiana

TYPE OF BORING: WET ROTARY

PSI Project No.: 0193522-01

LATITUDE: N 30° 18' 43.1"
LONGITUDE: W 91° 15' 23.4"

BORING LOCATION PLAN: APPENDIX SHEET NO. 2

DEPTH, FT.	SOIL TYPE	USCS SYMBOL	WATER LEVELS	SAMPLES	SOIL DESCRIPTION	N-BLOWS/FT.	% PASSING No. 200 SIEVE	LIQUID LIMIT LL	PLASTIC LIMIT PL	PLASTICITY INDEX PI	MOISTURE CONTENT (%)	SHEAR STRENGTH (tons/ft²) HANDPEN	SHEAR STRENGTH (tons/ft²) TORVANE	SHEAR STRENGTH (tons/ft²) UC	SHEAR STRENGTH (tons/ft²) UU	DRY UNIT WEIGHT (lbs/ft³)
		CH			**Hard, gray fat CLAY** w/ lumps of asphalt			67	21	46	27	2.13				
					-becomes very stiff w/ ferrous stains						32	1.75			0.60	82
5			▼		-becomes stiff						38	0.75				
											37	0.75				
		CL			**Firm, gray lean CLAY** w/ ferrous stains and traces of organics						42	0.38		0.27		79
10																
					-becomes very soft w/ silt lense						35		0.10			
15																
					-becomes stiff						45	0.50		0.26		74
20																
		CH			**Stiff, gray fat CLAY** w/ roots						43	0.50				
25																
		ML			**Firm, gray SILT** w/ clay	6					35					
30																
						5		28	27	1	33					
35																
						5					34					
40																
		CL			**Firm, gray lean CLAY** w/ silt	4		34	23	11	36					
45																
					-becomes very soft						47		0.15		0.21	76
50																

DEPTH OF BORING: 75 feet

DATE DRILLED: 10/20/13

DELAYED GROUNDWATER (FT): 6 @ 24 hours

NOTES: The stratification lines represent approximate boundaries.

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LOG OF BORING B-2

Dow Industrial Site
Plaquemine, Louisiana

TYPE OF BORING: WET ROTARY

PSI Project No.: 0193522-01

LATITUDE: N 30° 18' 43.1"
LONGITUDE: W 91° 15' 23.4"

BORING LOCATION PLAN: APPENDIX SHEET NO. 2

DEPTH, FT.	SOIL TYPE	USCS SYMBOL	WATER LEVELS	SAMPLES	SOIL DESCRIPTION	N-BLOWS/FT.	% PASSING No. 200 SIEVE	LIQUID LIMIT (LL)	PLASTIC LIMIT (PL)	PLASTICITY INDEX (PI)	MOISTURE CONTENT (%)	SHEAR STRENGTH (tons/ft²) HANDPEN	SHEAR STRENGTH (tons/ft²) TORVANE	SHEAR STRENGTH (tons/ft²) UC	SHEAR STRENGTH (tons/ft²) UU	DRY UNIT WEIGHT (lbs/ft³)
		CL			**Very soft, gray lean CLAY** w/ silt *(layer continued from previous page)*											
55		CH			**Soft, gray fat CLAY** w/ traces of roots						91		0.30			
60		CL			**Firm, gray lean CLAY** w/ silt partings and roots						39	0.50			0.28	84
65					-becomes very soft w/ roots						55		0.20			
70		CH			**Very soft, gray fat CLAY** w/ traces of roots						58	0.13	0.20			
75					-becomes firm						64	0.38				
					Boring terminated at 75 feet.											
80																
85																
90																
95																
100																

DEPTH OF BORING: 75 feet

DATE DRILLED: 10/20/13

DELAYED GROUNDWATER (FT): 6 @ 24 hours

NOTES: The stratification lines represent approximate boundaries.

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LOG OF BORING B-3

Dow Industrial Site
Plaquemine, Louisiana

TYPE OF BORING: HOLLOW STEM AUGER

PSI Project No.: 0193522-01

LATITUDE: N 30° 19' 7.85"
LONGITUDE: W 91° 16' 39.4"

BORING LOCATION PLAN: APPENDIX SHEET NO. 2

DEPTH, FT.	SOIL TYPE	USCS SYMBOL	WATER LEVELS	SAMPLES	SOIL DESCRIPTION	N-BLOWS/FT.	% PASSING No. 200 SIEVE	LIQUID LIMIT (LL)	PLASTIC LIMIT (PL)	PLASTICITY INDEX (PI)	MOISTURE CONTENT (%)	SHEAR STRENGTH (tons/ft²) HANDPEN	SHEAR STRENGTH (tons/ft²) TORVANE	SHEAR STRENGTH (tons/ft²) UC	SHEAR STRENGTH (tons/ft²) UU	DRY UNIT WEIGHT (lbs/ft³)
		CL			**Very stiff, brown lean CLAY** w/ grass, roots, silt partings, and ferrous stains						15	1.75				
					-becomes hard w/ ferrous stains						25	2.25		0.50		89
5		CH			**Stiff, gray fat CLAY** w/ organic stains, ferrous stains, and ferrous nodules						45	0.50				
			▼								50	0.50				
10											51	0.50		0.36		71
					-becomes firm											
15											37	0.38				
		ML			**Firm, gray SILT** w/ clay and traces of fine sand	4					27					
20																
			▼			7					28					
25					Boring terminated at 25 feet.											
30																
35																
40																
45																
50																

DEPTH OF BORING: 25 feet

DATE DRILLED: 10/22/13

GROUNDWATER DURING DRILLING (FT): 24

DELAYED GROUNDWATER (FT): 7 @ 24 hours

NOTES: The stratification lines represent approximate boundaries.

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LOG OF BORING B-4

Dow Industrial Site
Plaquemine, Louisiana

TYPE OF BORING: HOLLOW STEM AUGER

PSI Project No.: 0193522-01

LATITUDE: N 30° 18' 49.0"
LONGITUDE: W 91° 16' 29.5"

BORING LOCATION PLAN: APPENDIX SHEET NO. 2

DEPTH, FT.	SOIL TYPE	USCS SYMBOL	WATER LEVELS	SAMPLES	SOIL DESCRIPTION	N-BLOWS/FT.	% PASSING No. 200 SIEVE	LIQUID LIMIT LL	PLASTIC LIMIT PL	PLASTICITY INDEX PI	MOISTURE CONTENT (%)	SHEAR STRENGTH (tons/ft^2) HANDPEN	SHEAR STRENGTH (tons/ft^2) TORVANE	SHEAR STRENGTH (tons/ft^2) UC	SHEAR STRENGTH (tons/ft^2) UU	DRY UNIT WEIGHT (lbs/ft^3)
		CL			**Very stiff, brown lean CLAY** w/ organic stains and traces of roots			43	17	26	21	1.75				
		CH			**Very stiff, brown fat CLAY** w/ silt partings						42	1.25		0.67		84
5					-becomes stiff, gray w/ organic stains, ferrous stains, and ferrous nodules			74	26	48	41	0.50				
			▽		-becomes firm						38	0.25		0.33		77
10											46	0.25				
15					-w/ calcareous nodules						42	0.38		0.40		79
20											54	0.25				
25											51	0.38				
					Boring terminated at 25 feet.											
30																
35																
40																
45																
50																

DEPTH OF BORING: 25 feet

DATE DRILLED: 10/22/13

GROUNDWATER DURING DRILLING (FT): NOT ENCOUNTERED

DELAYED GROUNDWATER (FT): 8 @ 24 hours

NOTES: The stratification lines represent approximate boundaries.

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LOG OF BORING B-5

Dow Industrial Site
Plaquemine, Louisiana

TYPE OF BORING: HOLLOW STEM AUGER

PSI Project No.: 0193522-01

LATITUDE: N 30° 18' 53.5"
LONGITUDE: W 91° 15' 48.4"

BORING LOCATION PLAN: APPENDIX SHEET NO. 2

DEPTH, FT.	SOIL TYPE	USCS SYMBOL	WATER LEVELS	SAMPLES	SOIL DESCRIPTION	N-BLOWS/FT.	% PASSING No. 200 SIEVE	LIQUID LIMIT (LL)	PLASTIC LIMIT (PL)	PLASTICITY INDEX (PI)	MOISTURE CONTENT (%)	SHEAR STRENGTH (tons/ft²) HANDPEN	SHEAR STRENGTH (tons/ft²) TORVANE	SHEAR STRENGTH (tons/ft²) UC	SHEAR STRENGTH (tons/ft²) UU	DRY UNIT WEIGHT (lbs/ft³)
		CL			**Very stiff, brown lean CLAY** w/ traces of roots and ferrous nodules						24	1.88				
					-becomes stiff						24	0.75		0.87		96
5					-becomes gray w/ traces of roots						25	0.50				
					-becomes hard							2.25				
		CH			**Stiff, gray fat CLAY** w/ grass, organic stains, ferrous nodules, and ferrous stains						45	0.63		0.26		76
					-becomes firm						44	0.38				
10																
15											46	0.25				
					-w/ traces of calcareous nodules						39	0.25		0.25		79
20																
25											46	0.38				
					Boring terminated at 25 feet.											
30																
35																
40																
45																
50																

DEPTH OF BORING: 25 feet

DATE DRILLED: 10/22/13

GROUNDWATER DURING DRILLING (FT): NOT ENCOUNTERED

DELAYED GROUNDWATER (FT): 4 @ 24 hours

NOTES: The stratification lines represent approximate boundaries.

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LOG OF BORING B-6

Dow Industrial Site
Plaquemine, Louisiana

TYPE OF BORING: HOLLOW STEM AUGER

PSI Project No.: 0193522-01

LATITUDE: N 30° 19' 3.21"
LONGITUDE: W 91° 15' 42.6"

BORING LOCATION PLAN: APPENDIX SHEET NO. 2

DEPTH, FT.	SOIL TYPE	USCS SYMBOL	WATER LEVELS	SAMPLES	SOIL DESCRIPTION	N-BLOWS/FT.	% PASSING No. 200 SIEVE	LIQUID LIMIT (LL)	PLASTIC LIMIT (PL)	PLASTICITY INDEX (PI)	MOISTURE CONTENT (%)	SHEAR STRENGTH (tons/ft²) HANDPEN	SHEAR STRENGTH (tons/ft²) TORVANE	SHEAR STRENGTH (tons/ft²) UC	SHEAR STRENGTH (tons/ft²) UU	DRY UNIT WEIGHT (lbs/ft³)
		CL			**Very stiff, brown lean CLAY** w/ silt and organic stains						18	1.50				
			▼		-becomes firm, gray and tan w/ organic stains, traces of fine sand, ferrous nodules, and ferrous stains						27	0.38		0.33		88
5					-becomes gray						27	0.38				
		CH			**Stiff, tan and gray fat CLAY** w/ organic stains, ferrous nodules, and ferrous stains						36	0.63		0.48		82
					-w/ roots			66	20	46	35	0.50				
10																
					-becomes firm, slickensides						47	0.25		0.31		75
15																
		CL-ML	▼		**Firm, gray silty CLAY** w/ organic stains, fine sand, and ferrous nodules						36	0.25				
20																
		CH			**Stiff, gray fat CLAY** w/ ferrous nodules and ferrous stains						40	0.63				
25					Boring terminated at 25 feet.											
30																
35																
40																
45																
50																

DEPTH OF BORING: 25 feet

DATE DRILLED: 10/22/13

GROUNDWATER DURING DRILLING (FT): 19

DELAYED GROUNDWATER (FT): 3 @ 24 hours

NOTES: The stratification lines represent approximate boundaries.

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LOG OF BORING B-7

Dow Industrial Site
Plaquemine, Louisiana

TYPE OF BORING: HOLLOW STEM AUGER

PSI Project No.: 0193522-01

LATITUDE: N 30° 18' 29.3"
LONGITUDE: W 91° 14' 57.1"

BORING LOCATION PLAN: APPENDIX SHEET NO. 2

DEPTH, FT.	SOIL TYPE	USCS SYMBOL	WATER LEVELS	SAMPLES	SOIL DESCRIPTION	N-BLOWS/FT.	% PASSING No. 200 SIEVE	LIQUID LIMIT LL	PLASTIC LIMIT PL	PLASTICITY INDEX PI	MOISTURE CONTENT (%)	SHEAR STRENGTH (tons/ft²) HANDPEN	SHEAR STRENGTH (tons/ft²) TORVANE	SHEAR STRENGTH (tons/ft²) UC	SHEAR STRENGTH (tons/ft²) UU	DRY UNIT WEIGHT (lbs/ft³)
		CL			**Very stiff, brown lean CLAY** w/ silt						21	1.50		1.43		103
					-becomes stiff w/ ferrous nodules and organic stains						30	0.88				
5		CH	▽		**Firm, brown fat CLAY** w/ organic stains and ferrous nodules						40	0.38		0.39		80
					-becomes gray						30	0.38				
					-becomes stiff, brown w/ silt lens						34	0.88		0.41		84
10																
					-becomes firm, gray			93	28	65	42	0.38				
15																
											43	0.50		0.40		81
20																
					-w/ ferrous nodules and ferrous stains						47	0.38				
25					Boring terminated at 25 feet.											
30																
35																
40																
45																
50																

DEPTH OF BORING: 25 feet

DATE DRILLED: 10/22/13

GROUNDWATER DURING DRILLING (FT): NOT ENCOUNTERED

DELAYED GROUNDWATER (FT): 6 @ 24 hours

NOTES: The stratification lines represent approximate boundaries.

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KEY TO SYMBOLS

CLIENT Baton Rouge Area Chamber **PROJECT NAME** Dow Industrial Site

PROJECT NUMBER 0193522-01 **PROJECT LOCATION** Plaquemine, Louisiana

LITHOLOGIC SYMBOLS
(Unified Soil Classification System)

- CH: Fat Clay (CH)
- CL: Lean Clay (CL)
- CL-ML: Silty Clay (CL-ML)
- ML: Silt (ML)

SAMPLER SYMBOLS

- Split Spoon
- Shelby Tube

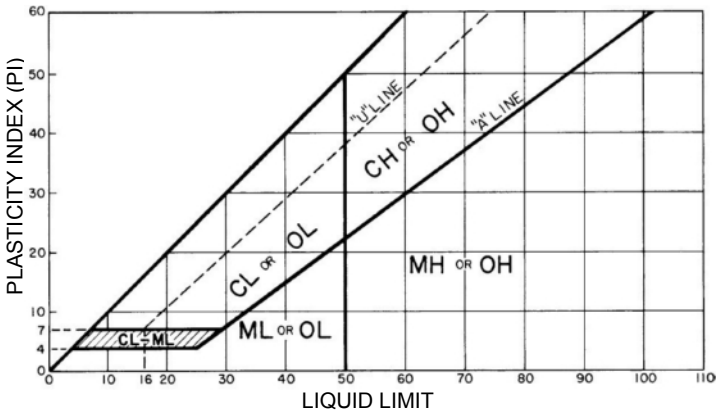
CONSISTENCY OF COHESIVE SOILS

CONSISTENCY	UNCONFINED COMPRESSIVE STRENGTH IN TONS/FT²
VERY SOFT	0.0 TO 0.25
SOFT	0.25 TO 0.50
FIRM	0.50 TO 1.0
STIFF	1.0 TO 2.0
VERY STIFF	2.0 TO 4.0
HARD	>4.0 OR 4.0+

RELATIVE DENSITY OF GRANULAR SOILS

CONSISTENCY	N-VALUE IN BLOWS/FOOT
VERY LOOSE	0-4
LOOSE	4-9
MEDIUM DENSE	10-29
DENSE	30-49
VERY DENSE	>50 OR 50+

ATTERBERG LIMITS CHART



ABBREVIATIONS

NP - NON PLASTIC
UC - UNCONFINED COMPRESSION
UU - UNCONSOLIDATED UNDRAINED TRIAXIAL
TV - TORVANE
W/ - WITH

- Water Level at Time of Drilling, or as Shown
- Water Level at End of Drilling, or as Shown
- Water Level After 24 Hours, or as Shown